

REMARKS

This application has been carefully reviewed in light of the final Office Action dated October 14, 2009. Claims 1 to 20 are in the application, with Claims 11 to 15 and 17 to 20 having been withdrawn from consideration. Of the claims presented for examination, Claims 1 and 16 are independent. Reconsideration and further examination are respectfully requested.

In the Office Action, Claims 1, 2, 4 to 7 and 16 were rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 6,084,604 (Moriyama) in view of U.S. Patent No. 5,798,776 (Uchiyama); Claims 3 and 8 were rejected under 35 U.S.C. § 103(a) over Moriyama in view of Uchiyama and further in view of U.S. Patent No. 6,328,403 (Iwasaki); and Claims 9 and 10 were rejected under 35 U.S.C. § 103(a) over Moriyama in view of Uchiyama and further in view of U.S. Patent No. 5,828,396 (Seto). These rejections are respectfully traversed.

Independent Claim 1 generally concerns a recording apparatus that uses an ink-ejecting recording head and performs recording by ejecting black ink and at least one color ink onto a recording medium from the recording head. The recording apparatus includes extraction means for extracting, on the basis of recording data, both black adjacent pixels composed of pixels whose adjacent pixels are recorded with black ink, and color adjacent pixels that include pixels whose adjacent pixels are recorded with color ink, from among the pixels constituting a black image. The recording apparatus further includes data creating means for creating data that corresponds to color ink so that recording with black ink and with color ink applied (or added) according to a given ratio is done, on the black adjacent pixels or the color adjacent pixels extracted by the extraction means, and

recording control means for performing recording with the recording head on the basis of the recording data and the data created by the data creating means. The black image is recorded by superposing an image composed of pixels formed by black ink and an image based on the data corresponding to color ink created by the data creating means. The data creating means creates data that corresponds to color ink by using different ratios for recording pixels with color ink onto the black adjacent pixels than for recording pixels with color ink onto the color adjacent pixels.

Thus, among its many features, Claim 1 provides for using different ratios for recording pixels with color ink onto black adjacent pixels than for recording pixels with color ink onto color adjacent pixels. The applied references of Moriyama, Uchiyama, Iwasaki and Seto are not seen to disclose or suggest at least this feature.

As understood by Applicants, Moriyama discloses that a boundary caused by a color difference between a black image formed by a plurality of color inks and a black image formed by the black ink alone is controlled not to be conspicuous. All black dots adjacent to color image dots 402 are formed by black dots 400 obtained by mixing the color inks under the above-mentioned control. Black dots to be arranged around the black dots 400 are controlled to include both black dots 400 obtained by mixing the color inks and dots 401 of the black ink alone. See Moriyama, column 17, lines 15 to 51; and Figure 26.

However, Moriyama is not seen to disclose or suggest using different ratios for recording pixels with color ink onto black adjacent pixels than for recording pixels with color ink onto color adjacent pixels.

Uchiyama is not seen to compensate for the deficiencies of Moriyama. In this regard, Uchiyama is seen to disclose that color ink is applied to a part of a black image adjacent to a color image. However, the color ink is seen to be applied with the same rate to each of (1) the pixels adjacent to the color image, of the black image, and (2) the other pixels. See Uchiyama, Figure 6.

Accordingly, Uchiyama is not seen to disclose or suggest using different ratios for recording pixels with color ink onto black adjacent pixels than for recording pixels with color ink onto color adjacent pixels.

In addition, Iwasaki and Seto have been reviewed and are not seen to compensate for the deficiencies of Moriyama and Uchiyama. In particular, Iwasaki and Seto are not seen to disclose or suggest using different ratios for recording pixels with color ink onto black adjacent pixels than for recording pixels with color ink onto color adjacent pixels.

Claim 1 is therefore believed to be allowable over the applied references.

In addition, independent Claim 16 is a method claim which generally corresponds to apparatus Claim 1. Accordingly, Claim 16 is believed to be allowable for the same reasons.

The other claims in the application are each dependent from the independent claims and are believed to be allowable over the applied references for at least the same reasons. Because each dependent claim is deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

No other matters being raised, it is believed that the entire application is fully in condition for allowance, and such action is courteously solicited.

No fees are believed due; however, should it be determined that additional fees are required, the Director is hereby authorized to charge such fees to Deposit Account 06-1205.

Applicants' undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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